

Solar activity ranged from low to moderate levels (R-1 minor) with the majority of the x-ray activity emanating from Regions 1890 (S11, L=170, class/area Ekc/950 on 05 November) and 1897 (S21, L=064, class/area Ekc/610 on 13 November).

The period began at moderate levels on 11 November with an M2 x-ray event at 11/1118 UTC from Region 1897. Region 1890 contributed a few C-class events, the largest a C7/Sf at 11/0048 UTC. By 12 November, solar activity decreased to low levels with numerous C-class events observed from Regions 1897 and 1890, the largest a C9/Sf at 12/2308 UTC from Region 1897. A return to moderate levels were observed on 13 November with an M1 x-ray event recorded at 13/1520 UTC from Region 1897. C-class activity was also observed from Region 1890 and new Region 1899 (N07, L=037, class/area Dki/630 on 14 November). Activity decreased to low levels on 14 November with low to moderate C-class activity observed from Regions 1897, 1890, 1899 and new Region 1900 (S19, L=105, class/area Dac/150 on 15 November).

15 - 17 November saw a return to moderate activity levels with M-class activity observed all three days. An M1/Sf was observed at 15/0229 UTC from Region 1899 on 15 November. A pair of M-class events were recorded on 16 November from Region 1900; an M1 at 16/0453 UTC and an M1/1f at 0749 UTC. Region 1897 also contributed a C8/Sf at 16/0621 UTC with Region 1893 (S13, L=101, class/area Dkc/420 on 17 November) contributing weak C-class activity. The summary period concluded with an M1/Sn flare at 17/0510 UTC from Region 1900. During the summary period, no Earth-directed CME activity was detected.

The greater than 10 MeV proton flux at geosynchronous orbit was slightly enhanced, but well below the 10 pfu threshold (S1-Minor) from 11 - 13 November (peak flux 1.4 pfu at 11/0920 UTC). The enhancement was most likely associated with X-class activity on 08 and 09 November from Region 1890.

The greater than 2 MeV electron flux at geosynchronous orbit was at moderate levels on 11 - 15 November and normal levels on 16 - 17 November.

Geomagnetic field activity ranged from quiet to active levels with minor to major storm periods observed at higher latitudes. The period began with quiet to active periods on 11 November due to waning effects from a positive polarity coronal hole high speed stream (CH HSS). Quiet levels persisted from 12 November through a majority of 15 November. By late on the 15th, solar wind parameters indicated a co-rotating interaction region was present in advance of a recurrent, negative CH HSS. Quiet to active conditions were observed from late on 15 November through midday on 17 November. The period ended with quiet conditions.

Solar wind, as measured at the ACE satellite, indicated wind speeds in the 500 to 560 km/s range through 11 November, with a gradual decrease to near 300 km/s early on 16 November. An increase to about 525 km/s was observed midday on 16 November followed by a steady decrease to 425 km/s by the end of the summary period. The interplanetary magnetic field (IMF) Bt reached a maximum of 10 nT early on 16 November, relaxed to about 5 nT through midday on



15 November and reached another maximum of 12 nT early on 16 November. The Bz component of the IMF generally varied between +/- 10 nT early on the 11th and again through a majority of the 16th with the field not varying much beyond +/- 5 nT the remainder of the period. The phi component was predominately in a positive (away) orientation from late on 11 November through late on 13 November and in a negative orientation (towards) the remainder of the period.

Space Weather Outlook

18 November - 14 December 2013

Solar activity is likely to be at moderate levels with a chance for X-class flare activity from 18 - 19 November due to potential flare activity from Regions 1893 and 1900. A chance for moderate levels will persist for the remainder of the outlook period.

A slight chance for a greater than 10 MeV proton event at geosynchronous orbit exists through the outlook period.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at normal to moderate levels during the outlook period.

Geomagnetic field activity is expected to range from quiet to active levels. Quiet to unsettled periods are expected on 18 November due to CH HSS activity. Predominately quiet levels are expected from 19 November - 01 December and again from 09 - 12 December. Quiet to active periods are expected on 04 - 08 December with quiet to unsettled periods on 13 - 14 December due to CH HSS activity.



Daily Solar Data

Date	Radio Flux 10.7cm	Sun spot No.	Sunspot Area (10 ⁻⁶ hemi.)	X-ray Background Flux	Flares							
					X-ray			Optical				
					C	M	X	S	1	2	3	4
11 November	164	104	1060	C1.0	7	1	0	6	0	0	0	0
12 November	168	147	1810	B8.8	12	0	0	9	0	0	0	0
13 November	171	128	1670	B9.3	12	1	0	3	0	0	0	0
14 November	176	234	1580	C1.0	16	0	0	6	0	0	0	0
15 November	178	272	1640	B9.3	7	1	0	11	1	0	0	0
16 November	175	213	1450	C1.0	13	2	0	6	2	0	0	0
17 November	177	282	1640	C1.0	10	1	0	14	0	0	0	0

Daily Particle Data

Date	Proton Fluence (protons/cm ² -day -sr)			Electron Fluence (electrons/cm ² -day -sr)		
	>1 MeV	>10 MeV	>100 MeV	>0.6 MeV	>2MeV	>4 MeV
11 November	2.2e+06	5.9e+04	2.3e+03		1.0e+07	
12 November	5.5e+05	3.0e+04	2.4e+03		1.5e+07	
13 November	4.3e+05	2.2e+04	2.3e+03		1.8e+07	
14 November	3.9e+05	1.4e+04	2.4e+03		2.6e+07	
15 November	5.4e+05	1.3e+04	2.6e+03		2.6e+07	
16 November	4.1e+05	1.1e+04	2.5e+03		1.3e+06	
17 November	1.6e+05	1.1e+04	2.5e+03		1.3e+06	

Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
11 November	13	3-3-3-3-3-2-1	30	4-4-6-5-4-4-2-0	16	4-4-4-3-3-3-2-1
12 November	2	1-2-0-1-1-0-0-0	1	1-1-0-0-1-0-0-0	2	1-1-0-0-1-0-0-0
13 November	2	0-1-0-1-1-1-1-0	5	0-0-1-2-4-1-0-0	3	0-1-1-1-2-1-0-0
14 November	2	0-0-0-1-2-1-0-0	0	0-0-0-1-0-0-0-0	2	0-0-0-1-1-1-0-1
15 November	6	1-2-1-0-1-2-2-3	10	0-1-2-3-3-4-2-2	8	1-2-1-1-1-2-2-4
16 November	11	3-3-2-3-3-2-1-2	12	2-1-2-4-4-3-1-2	9	3-3-2-3-3-2-1-2
17 November	5	2-2-2-2-2-1-1-0	9	1-1-4-4-2-0-1-0	6	2-2-3-2-1-1-1-1

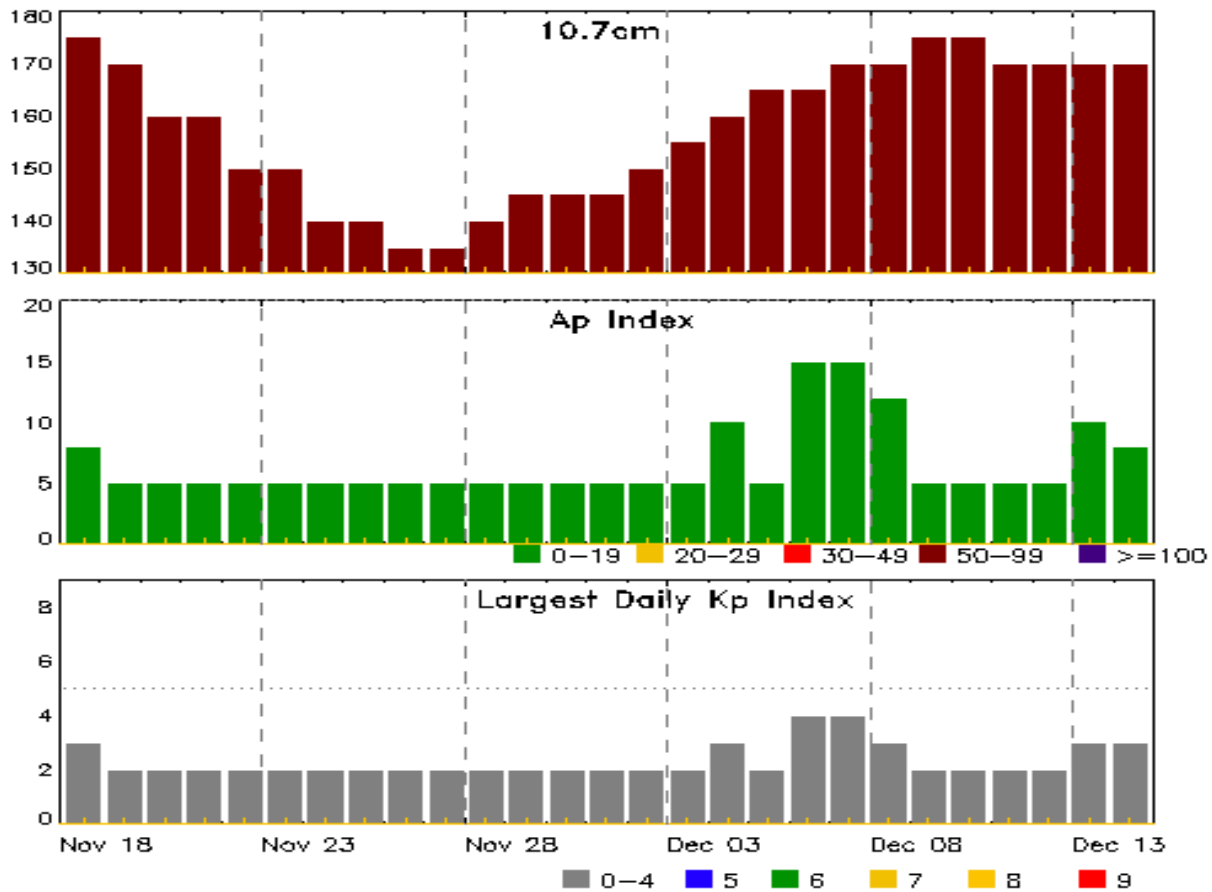


Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
11 Nov 0247	WARNING: Geomagnetic K = 4	11/0246 - 0700
11 Nov 0253	ALERT: Geomagnetic K = 4	11/0250
11 Nov 0644	EXTENDED WARNING: Geomagnetic K = 4	11/0246 - 1300
11 Nov 1752	WARNING: Geomagnetic K = 4	11/1751 - 2200
15 Nov 2207	WARNING: Geomagnetic K = 4	15/2215 - 16/1000
16 Nov 0003	ALERT: Geomagnetic K = 4	15/2359



Twenty-seven Day Outlook



Date	Radio Flux 10.7cm	Planetary A Index	Largest Kp Index	Date	Radio Flux 10.7cm	Planetary A Index	Largest Kp Index
18 Nov	175	8	3	02 Dec	150	5	2
19	170	5	2	03	155	5	2
20	160	5	2	04	160	10	3
21	160	5	2	05	165	5	2
22	150	5	2	06	165	15	4
23	150	5	2	07	170	15	4
24	140	5	2	08	170	12	3
25	140	5	2	09	175	5	2
26	135	5	2	10	175	5	2
27	135	5	2	11	170	5	2
28	140	5	2	12	170	5	2
29	145	5	2	13	170	10	3
30	145	5	2	14	170	8	3
01 Dec	145	5	2				



Energetic Events

Date	Time			X-ray		Optical Information			Peak		Sweep Freq	
	Begin	Max	Half	Class	Integ Flux	Imp/ Brtns	Location Lat CMD	Rgn #	Radio Flux		Intensity	
			Max						245	2695	II	IV
11 Nov	1101	1118	1130	M2.4	0.030			1897		76		
13 Nov	1457	1520	1541	M1.4	0.021			1897				
15 Nov	0220	0229	0233	M1.0	0.005	SF	N07E52	1899				
16 Nov	0447	0453	0457	M1.2	0.004			1900				
16 Nov	0745	0749	0753	M1.6	0.004	1F	S19W29	1900				
17 Nov	0506	0510	0513	M1.0	0.002	SN	S20W42	1900				

Flare List

Date	Time			X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
	Begin	Max	End				
11 Nov	0026	0032	0039	C6.4	SF	S15W26	1890
11 Nov	0035	0039	0040		SF	S13E44	1893
11 Nov	0043	0048	0051	C7.8	SF	S13W24	1890
11 Nov	1003	1007	1010	C2.3			
11 Nov	1101	1118	1130	M2.4			1897
11 Nov	1315	1337	1355	C4.8			1890
11 Nov	B1352	1357	1411		SF	S11W35	1890
11 Nov	1426	1451	1506		SF	S13W33	1890
11 Nov	1614	1617	1620	C1.9			1890
11 Nov	1656	1701	1705	C5.0	SF	S15W35	1890
11 Nov	2134	2146	2155	C4.3			1897
12 Nov	0203	0211	0220	C2.0			1897
12 Nov	0433	0527	0652	C3.3			1890
12 Nov	0618	0624	0628	C3.2			1897
12 Nov	0629	0630	0632		SF	S24E68	1897
12 Nov	1414	1417	1419	C2.0	SF	S18E60	1897
12 Nov	1458	1501	1503	C1.3	SF	S18E60	1897
12 Nov	1530	1534	1537	C1.2			1899
12 Nov	1610	1610	1612		SF	S15E57	1897
12 Nov	1644	1648	1653	C1.2			1897
12 Nov	1725	1728	1731	C1.3			1897
12 Nov	1931	1942	1954	C4.5	SF	S18E59	1897
12 Nov	2106	2113	2119	C2.1	SF	S16W49	1890
12 Nov	2137	2140	2143	C3.1	SF	S16W49	1890
12 Nov	2249	2308	2331	C9.8	SF	S21E56	1897



Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
12 Nov	2332	2334	2343		SF	S21E54	1897
13 Nov	0120	0121	0125		SF	S11W63	1890
13 Nov	0251	0310	0323	C1.8			1897
13 Nov	0351	0358	0403	C6.5	SF	S14W54	1890
13 Nov	0433	0442	0445	C2.6			1890
13 Nov	0908	0913	0917	C2.4			1890
13 Nov	1007	1035	1039	C3.5			1890
13 Nov	1153	1207	1212	C2.3			
13 Nov	1312	1317	1321	C2.6			1897
13 Nov	1457	1520	1541	M1.4			1897
13 Nov	1748	1756	1806	C4.0			1890
13 Nov	1935	1940	1944	C1.0			
13 Nov	2019	2042	2058	C5.9			1897
13 Nov	2253	2259	2304	C2.3			1899
13 Nov	2305	2308	2311	C3.1	SF	N07E68	1899
14 Nov	0016	0020	0024	C1.9			
14 Nov	0101	0112	0121	C2.3			1897
14 Nov	0132	0140	0149	C3.2	SF	S19E35	1897
14 Nov	0214	0217	0220	C2.5			
14 Nov	0343	0348	0352	C1.7			1897
14 Nov	0443	0447	0451	C1.5			1899
14 Nov	0543	0552	0558	C1.6	SF	S14W71	1890
14 Nov	0643	0646	0650	C3.5	SF	N07E65	1899
14 Nov	0750	0800	0808	C4.9	SF	S22E37	1897
14 Nov	0855	0906	0918	C3.0	SF	S21E35	1897
14 Nov	1245	1249	1252	C2.3			1899
14 Nov	1442	1445	1454	C1.6			1899
14 Nov	1844	1850	1859	C2.2			1897
14 Nov	2026	2031	2042	C1.9			1897
14 Nov	2245	2250	2255	C1.7	SF	S19W13	1900
14 Nov	2315	2322	2326	C3.2			1899
15 Nov	0220	0229	0233	M1.0	SF	N07E52	1899
15 Nov	0255	0259	0310	C1.7			1897
15 Nov	0357	0401	0406	C3.6			1890
15 Nov	0543	0546	0548	C1.6	SF	S19W15	1900
15 Nov	0741	0741	0745		SF	N12E50	1899
15 Nov	0751	0751	0755		SF	N09E50	1899
15 Nov	0804	U0806	0815		SF	N11E50	1899



Flare List

Date	Time			Optical			Rgn #
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	
15 Nov	B0843	U0915	0942		SF	S23E24	1897
15 Nov	0910	U0910	0919		SF	S12W16	1893
15 Nov	B0953	U0955	A1010		SF	S22E26	1897
15 Nov	B1009	U1026	A1053		SF	N11E49	1899
15 Nov	1050	U1050	A1103		SF	N20E02	
15 Nov	1105	1109	1113	C1.5	SF	S20E19	1897
15 Nov	1131	1135	1140	C7.5	1N	S18E20	1897
15 Nov	2002	2009	2015	C3.1			1900
15 Nov	2258	2303	2310	C3.5			
16 Nov	0159	0205	0210	C2.5			1897
16 Nov	0219	0222	0225	C2.2			1900
16 Nov	0231	0242	0251	C5.2			
16 Nov	0447	0453	0457	M1.2			1900
16 Nov	0531	0538	0543	C2.9			1897
16 Nov	0558	0602	0604	C3.1	SF	S12W29	1893
16 Nov	0615	0621	0628	C8.6	SF	S21E09	1897
16 Nov	0745	0749	0753	M1.6	1F	S19W29	1900
16 Nov	B0800	U0822	A0851		1F	S16E04	1897
16 Nov	1341	1349	1357	C2.7			1900
16 Nov	1415	1419	1428	C2.5			1900
16 Nov	1707	1712	1716	C3.0			
16 Nov	1740	1747	1752	C2.5	SF	S12W16	1893
16 Nov	1946	1951	1955	C2.1			1900
16 Nov	2243	2248	2252	C2.6	SF	S19W38	1900
16 Nov	2304	2305	2308		SF	S19W38	1900
16 Nov	2324	2331	2334	C5.2	SF	S19W39	1900
17 Nov	0102	0107	0113	C3.5	SF	S19W39	1900
17 Nov	0212	0217	0221	C3.2	SF	S19W40	1900
17 Nov	0400	0403	0403		SF	N10E25	1899
17 Nov	0404	0407	0408		SF	S21W05	1897
17 Nov	0506	0510	0513	M1.0	SN	S20W42	1900
17 Nov	0523	0527	0530	C3.3	SF	S13W42	1893
17 Nov	0737	0801	0824	C4.9	SF	S17W39	1893
17 Nov	0814	0814	0818		SF	S12W47	1893
17 Nov	1043	1047	1053	C2.8	SF	S14W49	1893
17 Nov	1410	1414	1418	C1.7			1899
17 Nov	1503	1512	1516	C3.0	SF	S18E56	1897
17 Nov	1859	1906	1910	C3.0	SF	S21W08	1897



Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
17 Nov	1917	1917	1920		SF	S21W50	1900
17 Nov	2017	2021	2026	C3.4	SF	S15W20	1897
17 Nov	2116	2119	2125	C1.5	SF	S24W11	1897



Region Summary

Date	Location	Sunspot Characteristics						Flares							
	Lat CMD	Helio	Area 10 ⁻⁶ hemi.	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical				
		Lon						C	M	X	S	1	2	3	4
Region 1887															
30 Oct	N21E63	222	20	1	Hsx	1	A								
31 Oct	N21E48	225	30	7	Cso	4	B								
01 Nov	N21E37	223	20	7	Cro	3	B								
02 Nov	N20E22	225	20	9	Cro	4	B								
03 Nov	N20E09	225	20	7	Cro	7	B								
04 Nov	N21W05	225	110	7	Dsi	23	BG					1			
05 Nov	N20W18	225	120	8	Dai	16	BG								
06 Nov	N20W31	224	90	8	Dai	11	B								
07 Nov	N19W45	226	80	8	Cao	11	B	1				1			
08 Nov	N19W59	227	80	8	Cao	9	B	1				1			
09 Nov	N19W71	225	30	6	Cro	3	B	1							
10 Nov	N18W84	225	10	4	Bxo	2	B	1							
								4	0	0	3	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 225

Region 1889															
02 Nov	S18E23	224	30	4	Cro	6	B	2			1				
03 Nov	S19E08	226	50	6	Dao	13	B								
04 Nov	S18W05	225	80	9	Dao	10	B								
05 Nov	S18W17	224	110	8	Dai	12	BG	1			1				
06 Nov	S18W30	223	80	7	Dai	12	B	2			3				
07 Nov	S19W44	225	10	7	Bxo	5	B								
08 Nov	S19W58	226	10	7	Bxo	2	B								
09 Nov	S19W72	227	plage												
10 Nov	S18W82	224	plage												
								5	0	0	5	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 225



Region Summary - continued

Date	Location	Sunspot Characteristics						Flares							
	Lat CMD	Helio	Area 10 ⁻⁶ hemi.	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical				
		Lon						C	M	X	S	1	2	3	4
Region 1890															
02 Nov	S09E74	173	120	8	Hsx	3	A								
03 Nov	S10E62	172	660	12	Ehc	15	BG	3			2				
04 Nov	S09E49	170	830	13	Ehc	31	BGD	3			3				
05 Nov	S11E36	170	950	14	Ekc	39	BGD	3	2	1	4	2			
06 Nov	S11E23	169	910	13	Ekc	46	BGD	9	1		10	1			
07 Nov	S11E10	171	920	13	Ehc	59	BGD	8	2		5	1			
08 Nov	S11W02	170	920	13	Ehc	58	BGD			1	1		1		
09 Nov	S11W15	170	660	13	Ekc	42	BGD	2				1			
10 Nov	S12W28	169	530	13	Ekc	28	BGD	3		1	1		1		
11 Nov	S11W42	169	410	13	Ekc	29	BGD	5			5				
12 Nov	S11W55	169	420	13	Ekc	32	BGD	3			2				
13 Nov	S11W69	170	290	12	Ekc	13	BG	5			2				
14 Nov	S12W83	171	90	12	Eao	3	B	1			1				
15 Nov	S13W95	171	10	2	Axx	3	A	1							
								46	5	3	36	5	2	0	0

Crossed West Limb.

Absolute heliographic longitude: 170

Region 1891

06 Nov	S18W11	205	20	2	Cao	3	B								
07 Nov	S18W24	205	70	6	Dac	9	BD	2			3				
08 Nov	S18W37	205	120	7	Dai	17	BD	2	1		2	1			
09 Nov	S18W50	204	80	6	Dao	9	B								
10 Nov	S17W65	206	plage												
11 Nov	S17W79	207	plage												
								4	1	0	5	1	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 205



Region Summary - continued

Date	Location		Sunspot Characteristics					Flares							
	Lat CMD	Helio Lon	Area 10 ⁻⁶ hemi.	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical				
								C	M	X	S	1	2	3	4

Region 1892

06 Nov	S05E67	126	10	1	Axx	1	A								
07 Nov	S05E54	127	10	4	Bxo	3	B								
08 Nov	S05E39	129	0	1	Axx	1	A								
09 Nov	S05E24	129	plage												
10 Nov	S05E09	132	plage												
11 Nov	S05W06	134	plage												
12 Nov	S05W21	136	plage												
13 Nov	S05W36	138	plage												
14 Nov	S05W51	140	plage												
15 Nov	S05W66	142	plage												
16 Nov	S05W81	143	plage												
								0	0	0	0	0	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 134

Region 1893

08 Nov	S12E66	102	130	2	Hsx	1	A								
09 Nov	S12E54	100	210	3	Hsx	1	A	3							
10 Nov	S12E42	99	180	4	Cso	5	B								
11 Nov	S12E28	98	170	3	Dso	4	B				1				
12 Nov	S13E15	99	240	3	Dso	8	B								
13 Nov	S12E03	98	140	4	Dso	6	B								
14 Nov	S13W10	98	240	8	Dsi	22	B								
15 Nov	S13W25	101	240	10	Dsc	24	BG				1				
16 Nov	S13W39	101	290	7	Dkc	23	BG	2			2				
17 Nov	S13W52	101	420	10	Dkc	31	BD	3			4				
								8	0	0	8	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 98

Region 1894

08 Nov	S07W34	201	10	1	Bxo	2	B								
09 Nov	S06W46	200	plage					1							
10 Nov	S06W61	202	plage												
11 Nov	S06W76	204	plage												
								1	0	0	0	0	0	0	0

Died on Disk.

Absolute heliographic longitude: 201



Region Summary - continued

Location		Sunspot Characteristics						Flares							
		Helio	Area	Extent	Spot	Spot	Mag	X-ray			Optical				
Date	Lat CMD	Lon	10 ⁻⁶ hemi.	(helio)	Class	Count	Class	C	M	X	S	1	2	3	4
Region 1895															
09 Nov	S16E78	77	plage					6							
10 Nov	S15E67	74	60	5	Cao	4	B	4							
11 Nov	S15E52	75	90	3	Cao	2	B								
12 Nov	S16E37	77	90	3	Cso	7	B								
13 Nov	S15E24	77	120	3	Hsx	3	A								
14 Nov	S17E10	77	100	5	Cso	2	B								
15 Nov	S16W02	78	100	5	Hsx	3	A								
16 Nov	S16W17	79	70	2	Hax	2	A								
17 Nov	S16W30	79	80	3	Hsx	5	A								
								10	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 78

Region 1896

10 Nov	N13E75	66	110	2	Hsx	1	A								
11 Nov	N11E60	66	140	2	Hsx	1	A								
12 Nov	N11E46	68	190	3	Hsx	1	A								
13 Nov	N12E34	67	140	3	Hax	1	A								
14 Nov	N11E20	67	160	2	Hax	2	A								
15 Nov	N11E07	69	130	2	Hax	2	A								
16 Nov	N11W06	68	150	4	Hsx	3	A								
17 Nov	N11W19	68	150	3	Cso	6	B								
								0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 68

Region 1897

11 Nov	S18E64	63	240	10	Dai	7	B	1	1						
12 Nov	S20E51	63	600	12	Ekc	26	BG	8			7				
13 Nov	S21E37	64	610	14	Ekc	29	BG	3	1						
14 Nov	S21E26	62	310	17	Fkc	87	BG	7			3				
15 Nov	S21E12	64	360	14	Ekc	84	BGD	3			3	1			
16 Nov	S20W04	66	240	18	Fac	63	BG	3			1	1			
17 Nov	S20W15	64	240	19	Fac	94	BG	4			5				
								29	2	0	19	2	0	0	0

Still on Disk.

Absolute heliographic longitude: 66



Region Summary - continued

Date	Location		Sunspot Characteristics					Flares							
	Lat CMD	Helio Lon	Area 10 ⁻⁶ hemi.	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical				
								C	M	X	S	1	2	3	4

Region 1898

11 Nov	S26E11	116	10	1	Axx	1	A								
12 Nov	S26W00	115	20	3	Cro	2	B								
13 Nov	S26W14	115	10	4	Bxo	3	B								
14 Nov	S26W25	113	10	2	Bxo	5	B								
15 Nov	S26W37	113	10	2	Bxo	4	B								
16 Nov	S26W51	113	plage												
17 Nov	S26W65	114	plage												
								0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 115

Region 1899

12 Nov	N06E76	37	250	7	Hhx	1	A	1							
13 Nov	N06E62	39	360	4	Hkx	3	A	2			1				
14 Nov	N07E50	37	630	8	Dki	10	B	5			1				
15 Nov	N06E35	39	600	9	Dko	14	BG		1		5				
16 Nov	N06E23	39	510	8	Dko	11	BG								
17 Nov	N06E10	39	510	8	Cko	18	BG	1			1				
								9	1	0	8	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 39

Region 1900

14 Nov	S19W17	105	30	5	Dso	10	B	1			1				
15 Nov	S19W29	105	150	7	Dac	24	BG	2			1				
16 Nov	S19W42	104	110	9	Dac	20	BG	6	2		3	1			
17 Nov	S19W55	104	130	9	Dac	31	BG	2	1		4				
								11	3	0	9	1	0	0	0

Still on Disk.

Absolute heliographic longitude: 105

Region 1901

14 Nov	S24W43	131	10	3	Bxo	3	B								
15 Nov	S24W57	133	20	4	Cro	8	B								
16 Nov	S24W70	132	30	5	Cro	7	B								
17 Nov	S24W82	131	30	9	Cro	3	B								
								0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 131



Region Summary - continued

Date	Location		Sunspot Characteristics					Flares							
	Lat CMD	Helio Lon	Area 10 ⁻⁶ hemi.	Extent (helio)	Spot Class	Spot Count	Mag Class	X-ray			Optical				
								C	M	X	S	1	2	3	4

Region 1902

15 Nov	N19W06	80	20	3	Dso	6	B								
16 Nov	N20W20	82	50	3	Dso	4	B								
17 Nov	N20W33	82	20	3	Cso	3	B								
								0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 80

Region 1903

17 Nov	S12E77	332	60	2	Hsx	1	A								
								0	0	0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 332

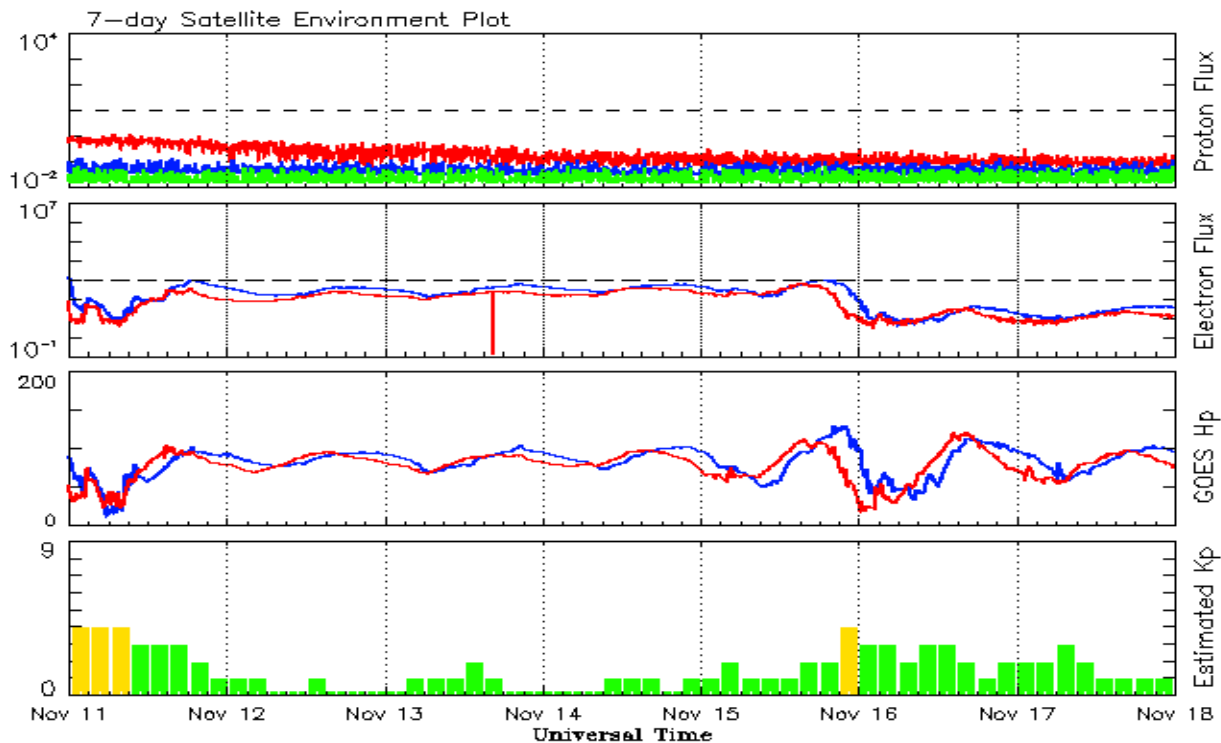


Recent Solar Indices (preliminary)
Observed monthly mean values

Month	Sunspot Numbers					Radio Flux		Geomagnetic	
	Observed values		Ratio	Smooth values		Penticton	Smooth	Planetary	Smooth
	SEC	RI	RI/SEC	SEC	RI	10.7 cm	Value	Ap	Value
2011									
November	133.1	96.7	0.73	86.3	61.1	153.1	119.5	3	8.0
December	106.3	73.0	0.69	89.2	63.4	141.2	121.6	3	8.0
2012									
January	91.3	58.3	0.64	92.0	65.5	133.1	124.4	6	8.3
February	50.1	32.9	0.66	94.2	66.9	106.7	126.7	7	8.4
March	77.9	64.3	0.82	94.1	66.8	115.1	126.8	14	8.1
April	84.4	55.2	0.65	91.3	64.6	113.1	125.8	9	8.0
May	99.5	69.0	0.69	87.7	61.7	121.5	123.8	8	8.2
June	88.6	64.5	0.73	83.9	58.9	120.5	121.1	10	8.3
July	99.6	66.5	0.67	82.4	57.8	135.6	119.5	13	8.3
August	85.8	63.0	0.74	83.1	58.2	115.7	119.2	7	8.1
September	84.0	61.4	0.73	83.7	58.1	123.2	118.9	8	7.8
October	73.5	53.3	0.73	85.0	58.6	123.3	119.2	9	7.4
November	89.2	61.8	0.69	87.3	59.7	120.9	120.1	6	7.3
December	60.4	40.8	0.68	88.0	59.6	108.4	120.1	3	7.5
2013									
January	99.8	62.9	0.63	87.1	58.7	127.1	118.9	4	7.5
February	60.0	38.1	0.63	86.7	58.4	104.4	118.0	5	7.4
March	81.0	57.9	0.71	85.7	57.5	111.2	117.1	9	7.4
April	112.8	72.4	0.64	86.7	57.9	125.0	116.6	5	7.2
May	125.5	78.7	0.63			131.3		10	
June	80.1	52.5	0.66			110.2		13	
July	86.1	57.0	0.66			115.6		9	
August	90.2	66.0	0.73			114.7		9	
September	55.0	36.9	0.67			102.7		5	
October	127.1	85.6	0.67			132.3		7	

Note: Values are final except for the most recent 6 months which are considered preliminary.
Cycle 24 started in Dec 2008 with an RI=1.7.





*Weekly Geosynchronous Satellite Environment Summary
Week Beginning 11 November 2013*

The proton flux plot contains the five-minute averaged integral proton flux (protons/cm²-sec -sr) as measured by the SWPC Primary GOES satellite, near West 75, for each of three energy thresholds: greater than 10, 50, and 100 MeV.

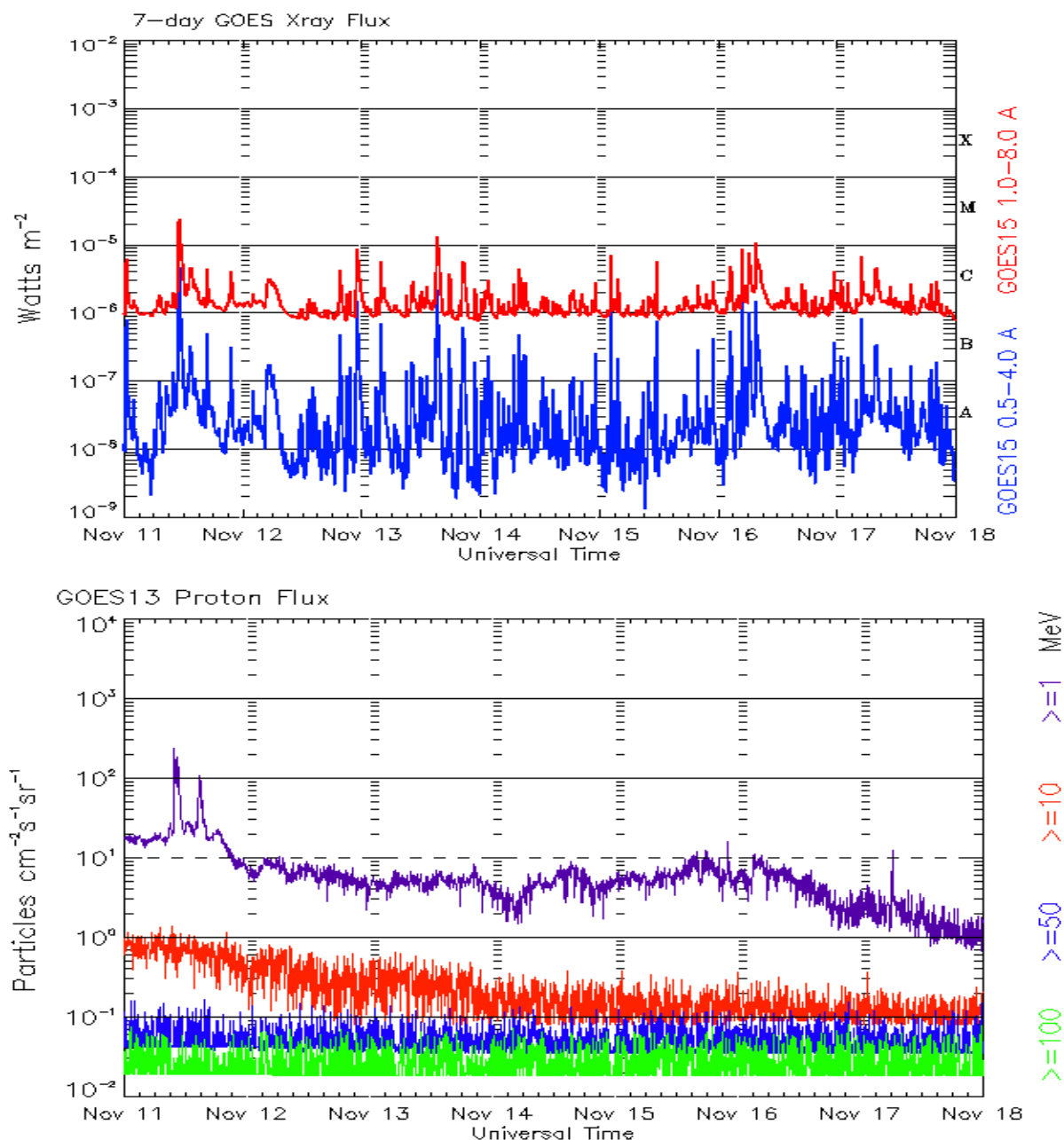
The electron flux plot contains the five-minute averaged integral electron flux (electrons/cm²-sec -sr) with energies greater than 2 MeV by the SWPC Primary GOES satellite.

The Hp plot contains the five minute averaged Hp magnetic field component in nanoteslas (nT) as by the SWPC Primary GOES satellite. The Hp component is parallel to the spin axis of the satellite, which is nearly parallel to the Earth's rotation axis.

The Estimated 3-hour Planetary Kp-index is derived at the NOAA Space Weather Prediction Center using data from the following ground-based magnetometers: Boulder, Colorado; Chambon la Foret, France; Fredericksburg, Virginia; Fresno, California; Hartland, UK; Newport, Washington; Sitka, Alaska. These data are made available thanks to the cooperative efforts between SWPC and data providers around the world, which currently includes the U.S. Geological Survey, the British Geological Survey, and the Institut de Physique du Globe de Paris.

The data included here are those now available in real time at the SWPC and are incomplete in that they do not include the full set of parameters and energy ranges known to cause satellite operating anomalies. The proton and electron fluxes and Kp are 'global' parameters that are applicable to a first order approximation over large areas. H parallel is subject to more localized phenomena and the measurements generally are applicable to within a few degrees of longitude of the measuring satellite.





*Weekly GOES Satellite X-ray and Proton Plots
Week Beginning 11 November 2013*

The x-ray plots contains five-minute averages x-ray flux (Watt/m^2) as measure by the SWPC primary GOES X-ray satellite, usually at West 105 longitude, in two wavelength bands, 0.05 - 0.4 and 0.1 - 0.8 nm. The letters A, B, C, M and X refer to x-ray event levels for the 0.1 - 0.8 nm band.

The proton plot contains the five-minute averaged integral flux units ($\text{pfu} = \text{protons/cm}^2\text{-sec -sr}$) as measured by the primary SWPC GOES Proton satellite for each of the energy thresholds: >1 , >10 , >30 , and >100 MeV. The P10 event threshold is 10 pfu at greater than 10 MeV.

Preliminary Report and Forecast of Solar Geophysical Data (The Weekly)

Published every Monday by the Space Weather Prediction Center.

U.S. Department of Commerce
NOAA / National Weather Service
Space Weather Prediction Center
325 Broadway, Boulder CO 80305

Notice: The 27-day Outlook, Satellite Environment, X-ray and Proton plots have been redesigned.
Comments and suggestions are welcome SWPC.Webmaster@noaa.gov

The Weekly has been published continuously since 1951 and is available online since 1997.

<http://spaceweather.gov/weekly/> -- Current and previous year

<http://spaceweather.gov/ftpmenu/warehouse.html> -- Online archive from 1997

<http://spaceweather.gov/ftpmenu/> -- Some content as ascii text

<http://spaceweather.gov/SolarCycle/> -- Solar Cycle Progression web site

<http://spaceweather.gov/contacts.html> -- Contact and Copyright information

http://spaceweather.gov/weekly/Usr_guide.pdf -- User Guide

